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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/615,590	GORP ET AL.	
	Examiner	Art Unit	
	Yixing Qin	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 July 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-43* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-43* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *8/13/04, 10/28/04, 6/17/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The claimed invention in claims 36-40 is directed to non-statutory subject matter. Claims 36-40 are rejected under 35 U.S.C. 101 because they are directed towards an abstract idea. Under the current 101 guidelines (specifically, page 30 "Annex I"), there are three 101 judicial exceptions – law of nature, natural phenomenon, and abstract idea. A program product is simply a set of instructions and does not produce a physical transformation or a tangible result. Even though it mentions that the program product is transportable on a machine readable medium, this does not mean that the program is claimed to be actually stored The suggested correction is to amend the claims to "A computer(machine) readable medium encoding a program..."

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

I. Claims 1-3, 5, 6, 9-11, 14, 15, 18-24, 26-30, 36, 40-43 rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts et al (U.S. Patent No. 6,650,431)

Regarding claims 1, 9, Roberts discloses a multiple print stream management system comprising:

a document data processing system for generating a soft-copy of a document to be created and for generating a print file therefrom for each document portion of the document to be created; (Fig. 4, Items 402, 404 show color and black and white pages separated in a print job)

a printing stage including a plurality of printers each operable in accordance with a respective print file received from the document data processing system, each printer for printing the document portion in accord with the respective print file; (Fig. 1, items 124, 126)

a finishing stage including one or more assembly devices for processing an output of each of the plurality of printers for collating the document portions into a final document corresponding to the document to be created; (Fig. 1, item 114) and

It does not explicitly disclose "a processor for tracking each document portion and for directing collation thereof in accordance with intended attributes of the final document."

However, Roberts discloses Fig. 1, item 108, Fig. 2 item 202, and Fig. 7 that there is a control station for controlling the various distribution of the job to printers and

a merging process. While it does not explicitly disclose that this processor controls and tracks collation, a certain processor will control the merging process. Putting the functionality of the merging tracking inside the processor 202 would be obvious. The attributes are show in Figs. 11A-K.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have the processor 202 controlled the merging process.

The motivation would have been to use one processor to control multiple functionalities to reduce cost.

Therefore, it would have been obvious to alter Roberts to obtain the invention as specified.

Regarding claims 2, 14, 24, Roberts discloses the multiple print stream management system according to claim 1 wherein the one or more assembly devices includes a print merge device for collating at least two document portions into a collated document in accordance with the attributes of the final document. (Fig. 1, item 114, column 7, lines 114, and column 7, lines 57-67)

Regarding claim 3, Roberts discloses the multiple print stream management system according to claim 2, wherein the processor tracks and directs collation of the at least two document portions collated by the print merge device. (Fig. 1, item 108, Fig. 2 item 202)

Regarding claims 5, 10, 15, Roberts discloses the multiple print stream management system according to claim 1, further comprising one or more scanning devices positioned in the finishing stage for detecting an identifier on each document page or on a group of document pages of the document portions. (Fig. 7, items 710, 712)

Regarding claims 6, 11, Roberts discloses the multiple print stream management system according to claim 5, wherein the processor is configured to compare the detected identifier with the attributes of the final document for verifying collation of the document portions. (column 18, lines 27-67)

Regarding claim 18, Roberts discloses the multiple print stream management system according to claim 9, further comprising a computer for producing a document file representing the document to be created. (Fig. 1, items 102, 104, 106)

Regarding claim 19, Roberts discloses the multiple print stream management system according to claim 18, wherein the computer creates a print file from the document file for each document portion, each printer receiving a respective print file for printing a respective document portion of the document to be created. (Fig. 4)

Regarding claims 20, 26, Roberts discloses the multiple print stream management system according to claim 18, wherein the computer creates the data file containing final document attributes. (column 7, lines 38-67)

Regarding claim 21, Roberts discloses the multiple print stream management system according to claim 9, wherein the data file maintains attributes represented by the identifier selected from a group consisting of a document page, a printer of the plurality of printers to which the document page or the group of document pages is to be sent, a printer of the plurality of printers from which the document page or the group of document pages was processed, the order by which the document page or group of document pages is to be collated, a predetermined path through the printer stage which the document page or the group of document pages will progress, a predetermined path through the finishing stage which the document page or the group of document pages will progress, and any combination thereof. (Fig. 4, column 9, lines 16-46)

Regarding claim 22, Roberts discloses a method for collating and tracking portions of a document to be created from multiple print resources, comprising the steps of:

generating multiple print files from a soft copy of the document to be created; (Fig. 4)

printing document portions from the multiple print files; (Fig. 1, items 118, 120)

collating the document portions into a final document corresponding to the document to be created; (Fig. 1, item 114)

detecting an identifier on each document page or a group of document pages of the document to be created; (Fig. 4, and column 9, lines 16-46) and

verifying collation of the document portions in accordance with the detected identifier. (Fig. 7)

Regarding claim 23, Roberts discloses a method for collating and tracking portions of a document to be created from multiple print resources, comprising the steps of:

compiling attributes of a final document corresponding to the document to be created; (Fig. 4, and column 9, lines 16-46)

obtaining from multiple print resources portions of the document to be created; (Fig. 1, items 118, 120)

collating the document portions into the final document; (Fig. 1, item 114)

detecting an identifier on each document page or a group of document pages of the document to be created; (Fig. 4, and column 9, lines 16-46)

comparing the detected identifier with the compiled final document attributes; (Fig. 4, and column 9, lines 16-46) and

verifying collation of the document portions from the comparison. (Fig. 7)

Regarding claim 27, Roberts discloses the method according to claim 26, further comprising the step of populating data in the data file corresponding to the detected identifier. (Figs. 11A-11H)

Regarding claim 28, Roberts discloses the method according to claim 23, further comprising the step of identifying a primary document from the detected identifier. (Fig. 7, column 18, lines 1-44, especially lines 31-34)

Regarding claim 29, Roberts discloses the method according to claim 28, further comprising the step of accessing a data file according to the detected primary document identifier. (Fig. 7, column 18, lines 1-44)

Regarding claim 30, Roberts discloses the method according to claim 23, further comprising determining the order of collation from final document attributes in accordance with the detected identifier. (Fig. 7, column 18, lines 23-44)

Regarding claim 36, Roberts discloses a program product, comprising executable code transportable by at least one machine readable medium, wherein execution of the code by at least one programmable computer causes the at least one programmable computer to perform the sequence of steps, comprising:

receiving workflow data of document portions of a document to be created originating from multiple document steams; (Fig. 1, items 118, 120)

comparing the workflow data with intended final document attributes of the document to be created; (Fig. 7, Figs. 11A-K, column 18, lines 1-44) and

controlling collation of the document portions based on the comparison, to create a finished document in accord with the intended final document attributes. (Fig. 7, Figs. 11A-K, column 18, lines 1-44)

Regarding claim 40, Roberts discloses the program product according to claim 36, further comprising storing the workflow data within the at least one programmable computer. (Fig. 1, items 102, 104, 106)

Regarding claim 41, Roberts discloses a computer control system for controlling collation of document portions originating from multiple document streams into a final document, comprising:

a computer for receiving data representing attributes of each document page or a group of document pages of each document portion, the computer for tracking the document portions originating from each document stream; and (Fig. 1, item 108)

a stored data file for maintaining attributes of the final document, the stored data file being accessible by the computer, (Figs. 11A-11K)

wherein the computer compares received data with final document attributes for controlling collation of the document portions and verifying collation thereof. (Fig 7 and column 18, lines 1-44)

Regarding claim 42, Roberts discloses the computer control system according to claim 41, further comprising a scanning device in communication with the computer, the scanning device configured to detect an identifier on each document page or the group of document pages and supply the detected identifier data to the computer. (column 18, lines 38-41)

Regarding claim 43, Roberts discloses the computer control system according to claim 41, wherein the computer stores data responsive to identifier detection in the data file. (column 18, lines 21-44)

II. Claims 4, 16, 17, 25, and 31-33 rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts et al (U.S. Patent No. 6,650,431) in view of Farrell (U.S. Patent No. 6,873,426)

Regarding claims 4, 16, 25, Roberts discloses collating multiple portions of a print job.

It does not explicitly disclose "wherein the one or more assembly devices includes an auxiliary device downstream from the print merge device for applying an auxiliary item to the collated document in accordance with the attributes of the final document."

However, Farrell discloses in Fig. 3 and column 4, lines 43-65 that various finishing operations can be additionally performed on a document.

Roberts and Farrell are combinable because both are the art of finishing documents.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have allowed for additional finishing operations.

The motivation would have been to increase the capability of the system by allowing multiple finishing processes.

Therefore, it would have been obvious to combine Roberts and Farrell to obtain the invention as specified.

Regarding claim 17, the secondary reference, Farrell, discloses the multiple print stream management system according to claim 16, further comprising a scanning device positioned corresponding to the auxiliary device for detecting an identifier on the auxiliary item. (column 5, lines 23-38 – the identifiers can be human or machine readable code, so some sort of detection occurs in order to read the code.)

Regarding claim 31, the secondary reference, Farrell, discloses the method according to claim 23, further comprising the step of determining whether any auxiliary item inserts should be applied to a collated document corresponding to the detected identifier. (column 5, lines 40-49)

Regarding claim 32, the secondary reference, Farrell, discloses the method according to claim 31, further comprising the step of detecting an identifier on the auxiliary item. (column 5, lines 23-38)

Regarding claim 33, the secondary reference, Farrell, discloses the method according to claim 32, further comprising verifying the auxiliary item insert corresponds to the collated document. (column 5, lines 40-49).

III. Claims 7, 8, 12, 13, 34, 35, and 37-39 rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts et al (U.S. Patent No. 6,650,431) in view of Jones et al (U.S. Patent No. 7,034,951)

Regarding claims 7, 8, 12, 13, 34, 35, 38, 39, the Roberts reference discloses a method of distributed printing.

It does not explicitly disclose "wherein in the event of an error in collation, the processor is configured to cause at least one printer of the printing stage to re-print at least one affected document portion of the document portions."

However, Jones discloses in Fig. 3, item 110, and column 6, lines 6-34 that unmatched pages needs to be reprinted.

Roberts and Jones are combinable because both are in the art of distributed printing.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have reprinted unmatched or wrong pages.

The motivation would have been to reprint pages that were wrongly printed so that the document can be formatted correctly.

Therefore, it would have been obvious to combine Roberts and Jones to obtain the invention as specified.

Regarding claim 37, the secondary reference, Jones, discloses the program product according to claim 36, wherein to enable correct collation of the document portions, automatically halting collation of the document portions when workflow data does not correspond to the final document attributes. (column 5, line 46 – column 6, line 33. Jones explains that error messages may be presented to an user to help identify and reprint pages. Although stopping the collation is not explicitly stated, it would be obvious to do so since the collation process is not complete without the missing or incomplete pages being reprinted.)

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yixing Qin whose telephone number is (571)272-7381. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler Lamb can be reached on (571)272-7406. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

YQ

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SUPERVISORY PATENT EXAMINER